Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
	Total KPWD SR 2018-19 Items Construction Cost								1,06,82,385.00
	Total Qty Construction Cost								1,14,83,762.00
78	12% GST on KPWD SR 2018-19 Items								12,81,886.20
79	DPR Preparations & PMC Charges 2.0%								2,29,675.24
	Sub Total								1,29,95,323.44
80	Miscelleneous And Rounding off								4,676.56
	Grand Total Qty								1,30,00,000.00

Bharath Engineering Innovation Design & Consulting (P) Ltd. Bangalore

Consultant

Contractor

Assistant Engineer

Assistant Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Technical Sanction
Accorded For Rs.130.00 Lakhs only
Head of A/C P3590
CER NO :192 Dt:06.11.2019

TA - CE (YNK)

Executive Engineer
Project Division
Yelahanka Zone
Bangalore

6/12/19

Administrative Approval
Accorded For Rs.130.00 Lakhs
Head of A/C. P3590
CER NO :27 Dt:04/09/2020

S.E. (Project)

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
	(Page No. 25, Item No. - 5.6 of PW;P&IWTD S.R 2018-19)								
	1st Step	Cum							
			1	65.00	0.90	0.45	26.33		
			1	55.00	0.90	0.45	22.28		
	2nd Step								
			1	65.00	0.75	0.45	21.94		
			1	55.00	0.75	0.45	18.56		
	Rate Analysis					**Total Qty**	**89.10**	**4853.52**	**4,32,449.00**
	Basic Rate	**4494.00**							
	Area Weightage	**8.00%**							
	Total Qty	**4853.52**							
41	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13								
	(Page No. 25, Item No. - 5.9 of PW;P&IWTD S.R 2018-19)								
	3rd Step	Cum							
			1	65.00	0.45	0.23	6.73		
			1	55.00	0.45	0.23	5.69		
	Deductions								
			-40	0.45	0.45	0.45	-3.65		
	Rate Analysis					**Total Qty**	**8.78**	**5921.64**	**51,962.00**
	Basic Rate	**5483.00**							
	Area Weightage	**8.00%**							
	Total Qty	**5921.64**							
42	KSRB 15.1 Providing flush pointing 20 mm deep to square rubble, course or uncoursed stone masonry with cement mortar after rakingvjoints to depth of 20mm nicely lining, including cost of materials, labour,vcuring complete as per specifications								
	(P No. 115, I No. - 15.1 of PW;P&IWTD SR 2018-19)								
		Sqm							
	3rd Step	Cum							
		2	1	65.00		0.23	29.90		
		2	1	55.00		0.23	25.30		
	Deductions								
		-2	-40	0.45		0.45	36.00		
	Rate Analysis						**91.20**	**152.28**	**13,888.00**
	Basic Rate	**141.00**							
	Area Weightage	**8.00%**							
	Total Qty	**152.28**							

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
43	Providing and laying in position reinforced cement concrete of design mix M20 with OPC v@ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum and fine aggregates @0.460 cum, with super plasticisers @ 3 Liters confirming to IS 9103-1999 reafirmed - 2008, machine mixed, cocnrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) Including attached pilasters, columnspillar, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials labour, HOM curing, complete but excluding cost of reinforcement as per specifications.								
	(P No. 14, I No. - 4.11 of PW;P&IWTD SR 2018-19)								
	Pilaster	Cum	40	0.45	0.45	0.45	3.65		
							3.65	**6111.72**	**22,277.00**
	Rate Analysis								
	Basic Rate	**5659.00**							
	Area Weightage	**8.00%**							
	Total Qty	**6111.72**							
44	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass cocnrete including cost of all materials, labour complete as per specifications, Specification No. KBS 4.6.2								
	(P No. 16, I No. - 4.28 of PW;P&IWTD SR 2018-19)								
	Shuttering for Pilaster	Sqm	80	0.45		0.45	16.20		
	Rate Analysis						**16.20**	**278.64**	**4,514.00**
	Basic Rate	**258.00**							
	Area Weightage	**8.00%**							
	Total Qty	**278.64**							
45	Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. Including cost of all labour complete as per specifications.								
	(Page No. 7, Item No. - 2.10 of PW;P&IWTD S.R 2018-19)								
	EarthWork Quantity	Cum					270.00		
	Deductions								
	PCC						-27.00		
	SSM up to GL						-89.10		
							153.90	**217.08**	**33,409.00**
	Rate Analysis								
	Basic Rate	**201.00**							
	Area Weightage	**8.00%**							
	Total Qty	**217.08**							

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
46	KSRB 4.1.6 : Providing and laying in position reinforced cement concrete of design mix M15 with OPC cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878cum and fine aggregates @ 0.459cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintles, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets,coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6								
	(P No. 12, I No. - 4.6 of PW;P&IWTD SR 2018-19)								
	Coping Concrete	Cum							
			1	65.00	0.45	0.10	2.93		
			1	55.00	0.45	0.10	2.48		
	Deductions								
			-40	0.45	0.45	0.10	-0.81		
							4.59	**5855.76**	**26,878.00**
	Rate Analysis								
	Basic Rate	**5422.00**							
	Area Weightage	**8.00%**							
	Total Qty	**5855.76**							
47	KSRB 5-14 : Providing and constructing precast concrete solid blocks with compressive strength not less than 3.5 Newton per sqm with cement mortar 1:4 masonry (quoin, Jamb, closer blocks) with solid concrete blocks of size 40x15x20cms conforming to I.S: 2185/1965 in superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications.								
	(P.No.25, I.No.5.27.2 of PW, P&IWTD SR2018-19)								
	Walls	96 Sqm	1	65.00		1.00	65.00		
			1	55.00		1.00	55.00		
						Total Qty	**120.00**	**1029.24**	**1,23,509.00**
	Rate Analysis								
	Basic Rate	**953.00**							
	Area Weightage	**8.00%**							
	Total Qty	**1029.24**							
48	Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry incluing rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Cement Mortar 1:4								
	(P No. 116, I No. - 15.16 of PW;P&IWTD SR 2018-19)								
	Exernal Platesring	2	1	65.00		1.00	130.00		
		2	1	55.00		1.00	110.00		
	Total Qty	sq-m					**240.00**	**281.88**	**67,651.00**
	Rate Analysis								
	Basic Rate	**261.00**							
	Area Weightage	**8.00%**							
	Total Qty	**281.88**							

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
49	Fabricating, providing and erecting in position of MS Hot Dip Galvanized Sq. Hallow Poles of 132 x 132 Heavy gauge of length 3000mm with MS. Hot dip galvanized grill work as per approved design and drawing of chief architect. Using 12x75mm galvanized flat for alround frame and 20mm x 20mm galvanized-forged design with square for for vertical al 150mm C/C as shown in the drawing including providing forged ornamental arrow head in top and bottom. The work is inclusive of throughing flat, square rods, placing welding all the joints, including grinding, finishing 2 coats of anticorrosive paint over one coat of metal primer. The rate is inclusive of all materials like MS. Hollow galvanized pipe, flats, forged square rods, cost of labour for all items of work cost painting, welding, cutting, grinding with all lead and lift as per specification including loading and unloading with cost and conveyance of all materials, labour, machinery and incidental charges for the successful completion of the work as per the direction Engineer-in-charge of the work.								
	Compound Wall grill	Sqm	1	57.00		1.50	85.50		
			1	55.00		1.50	82.50		
							168.00	**9144.14**	**15,36,216.00**
	Approved Data Rate								
	Rate Analysis								
	Data Rate	**9144.14**							
50	Fabricating, providing and erecting in position Hot dip galvanized Gate. Using 72 x 72 x 4.8mm Sq. G I Pipe Frame with top pipe bending in heavy duty hydraulic press with sand packing and hot bending to form double arch as per drawing profile, 20mm hot dip galvanized sq. rod for verticals at 150mm c/c, as shown in the drawing including providing hot do galvanized forged ornamental design in between rods and heads at top, middle and bottom. Intermediate supports of 75x12mm and 50X6mm arch bent to hot dip galvanized flats. the work is inclusive of throughing GI, flat GI Sqm. rods, placing, welding all the joints including grinding, finishing metal patty, painting two coats enamel painting. The rate is inclusive of all materials Like G I Sq. GI Pipe, GI Forged designs etc., heavy duty hinges are made out of 75mm sold sq. block assembled with 20mm du bearing in three places for each flop. Heavy duty locking arrangement of low places including cost of labour, painting, erection charges using hoist pulley cranes with all lead and lift, loading, transportation, unloading, scaffolding charges and all other incidental charges for successful completion of the work as per directions of the Engineering charge of the work								
	Entry Gate	Sqm	1	8.00	2.80		22.40		
							22.40	**12475.03**	**2,79,441.00**
	Rate Analysis								
	Data Rate	**12475.03**							
	ELECTRICAL WORK								
51	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping using copper PVC insulated multi strand2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. (5/2.1) I. Point wiring using class A Materials a) Short point up to 3Mtr from tapping point to out let via switch GROUP A Page no 025								
P25 5.7.2		Each					100.0	174.00	17,400.00

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
52	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping using copper PVC insulated multi strand2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. (5/2.1) I. Point wiring using class A Materials b) Medium point above 3Mtr up to 6Mtr from tapping point to out let via switch GROUP A	Each					100.0	245.00	24,500.00
53	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping using copper PVC insulated multi strand2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. (5/2.1) I. Point wiring using class A Materials c) Long point above 6Mtr up to 10Mtr from tapping point to out let via switch GROUP A 2.1.3	Each					50.0	363.00	18,150.00
54	wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand 1x1Sqmm copper wire with low conductor resistance single core wire in open or concealed system of wiring specified IS-694 GROUP-A 6,2.5	Each					200.0	13.00	2,600.00
55	Supplying and mounting 2 Nos. of 2 way 6 amps flush type switches either surface/flush mounted on existing gang box or in 4mm thick plastic sheet and mounted on a flush mounted wooden box and wiring as required.(15/3.2)	Each					8.0	171.00	1,368.00
56	Supplying 6A flush type socket and 6 amps flush type SP switch either flush mounting in a existing in a 4mm thick plastic sheet and fixing over a flush mounted wooden box and wiring using necessary capacity wires as required.(15/3.1) b) 6Amps 3/5 way switch socket.	Each					50.0	150.00	7,500.00
57	Supply and fixing of bakelite modular switch/ socket /stepped electronic fan regulator on existing modular switch plate as per IS 3854 and IS 1293 P. 16 1.No.3.3.3	Each					20.0	286.00	5,720.00
58	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve , indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required.(47/6.16) 5-32Amps SPN Group 'A'	Each					15.0	418.00	6,270.00
59	Supplying PVC/GI flexible conduit pipe...mm dia fixing on surface over inverted tapered wooden plugs or phill plugs or rawl plugs and clamped using heavy gauge saddles at an interval of 300mm using NF screws and the either end of the pipe terminatedcompletely.(3/1.9)a) 25mm	Mtr.					20.0	23.00	460.00
60	Wiring for lighting/power circuit using one of PVC insulated 1100v grade, multistrand Copper conductor single core cable in open orconcealed system of wiring. (6/2.5) DISTRIBUTION BOARDS AND 15 Amps plug points 4 sqmm 2.5.3	Mtr.					500.0	29.20	14,600.00
61	Supplying tinned copper lugs and crimping and wiring to termina point for wire of the following sizes.(64/7.21)4/6 sqmm 7.21.3	Each					100.0	6.25	625.00
62	Supplying of 4' feet - LED PVC Square batten 28W with high quality diffuser with Life 25000 burning hours & 70% limen maintence with CRI > box type suitable for 28W T5 single t 80. Power input; 220-240V @ 50Hz & power factor > 0.9 along with CE approved drivers. 5years warranty against any manufacturing defect working u win lamp & suspennder standerd electrical condition. (25/4.29.2) 1x4'-28 Watts	Each					70.0	1774.00	1,24,180.00

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
63	Fixing all types and all capacities of fluorescent / false ceilling / spot / LED fittings indoor on the wall / celling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and clamps. (108/17.7) 17.7.1								
		Each					100.0	98.00	9,800.00
64	Supplying of 1440rpm heavy duty exhaust fan with bracke tblades suitable to operate on 230V 50Hz, AC Supply complete.(78/9.2.2) I) 12" Sweep (300mm)								
		Each					6.0	3654.00	21,924.00
65	Supplying capacitor type ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. Single phase AC supply conforming to ISS-374-1979 and with double ball bearing system and as per technical data approved.(78/9.3.1.2) a.Regular model (Khaitan, Crompton Greaves, Orient, Polar, Bajaj,Havells) 48" (1200mm)								
		Each					20.0	1900.00	38,000.00
66	Supplying of 2'x2' LED recessed liminaire with 36 Watts system wattage. Housing Shall be with pressure die cast aliminum alloy with corrosion proof resistant polyester power coated. Drive operates with voltage range from 100V to 270V 50/60Hz with short circuit, overload and mis-wiring protection. Lumen Maintenance of 70% at 70% at 500000 Hrs. injuction moulded poly carbonate diffuser for better mechanical stability, light transmission & avoid pot hole effect. Junction Temperature shall be <70 degree Celsius. Driver is on constant current driver @ 0.06A with PF >0.92 with line voltage @ 220-240V 50/60Hz, driver efficiency > 85% & THD< 15%, LED Efficiency > 130 im/W at 1W & Fixture Efficiency > 75im/w with CRI > 75 with injuction moulded polycarbonate lens with < 80mm depth. 5Years Warrenty against any manufacturing defect working under standerd electrical condition.(26/4.33.2) a)2'x2'-36Watts								
		Each					10.0	8242.00	82,420.00
67	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete. (49/6.40.1)a) 14SWG								
		Sq cm					28000.0	0.37	10,360.00
68	Supplying ..... amps rated 3phase with neutral bus bar using required capacity electrolytic alluminium strips covered with heat shrinkable coloured PVC sleeve, mounted on phenolic/FRP/DM insulator which are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary botls,nuts and washers etc., complete.(49/6.38.1) b) 100Amps 4x30x10mm Alluminium Strips								
		Rmtr.					5.0	2135.00	10,675.00
69	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 220v A.C. 50 Hz 12/24v D.C.(48/6.36) Group A								
		Each					3.0	442.00	1,326.00
70	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve , indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required.(47/6.16) a) 5-32Amps SP Group 'A'								418.00
		Each					5.0	414.00	2,070.00
71	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. (49/6.39) d) 50x50x6mm C channel 6.39.2								
		Rmtr.					2.0	338.00	676.00

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
72	Supplying and running of GI/Copper strips for groundingconnections, using necessary fixing materials as required.(55/7.3.1) GI strip 25x3mm								
		Mtr.					25.0	77.00	1,925.00
73	Supplying of LT UG cable having aluminium conductor PVC insulated, sheathed, galvanised, steel wire/steel tap armoured cable with PVC outer sheathing 1.1 KV class.(55/7.4) Class `A' PVC Cable 3.5 core 25 sqmm 7.4.11								
		Mtrs.					150.0	657.00	98,550.00
74	Digging of trench of 0.6m deep x 0.50 mtr wide refiling the trench to the required ground level and consolidatingetc., complete.(As per Civil SR KSRB I-2, P-7)(61/7.9)In soil (ordinary) 7.9.1								
		Mtrs.					25.0	78.00	1,950.00
75	Supplying tinned copper lugs and crimping and wiring to minal point for wire of the following sizes.(64/7.21) f) 25 sqmm SR-14.15 7.21.13								
		Each					8.0	241.00	1,928.00
76	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm.								
	Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have inhouse facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. (As per SR KSRB I-12.9.6, P-67) SR 19-20								
	LED Flood Light 200W	Each					9.0	18000.00	1,62,000.00
77	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/ clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer								
	. UL approved MCPCB . LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have inhouse facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. (As per SR KSRB I-12.7.1, P-66)								
	LED Post Top Lantern with 25 watts	No's		24.00			24.0	5600.00	1,34,400.00

Sl.No.	Description	Unit	No.	L	B	D	Qty	Rate in Rs.	Amount in Rs.
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	Total Qty Construction Cost								1,14,83,762.00
78	12% GST on KPWD SR 2018-19 Items								12,81,886.20
79	DPR Preparations & PMC Charges 2.0%								2,29,675.24
	Sub Total								1,29,95,323.44
80	Miscelleneous And Rounding off								4,676.56
	Grand Total Qty								1,30,00,000.00

Bharath Engineering Innovation Design & Consulting (P) Ltd. Bangalore 22

Consultant

Contractor

Assistant Engineer

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Assistant Executive Engineer

Technical Sanction
Accorded for RS130 : Walacheruly
Head of A/C P3590
CER NO :192..... Dt 06.11.2019

TA

CE (YNK)

6/12/19